Acoustics, Ultrasound and Vibration, United States, NIST (National Institute of Standards and Technology)

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty						
Quantity	**Instrument or Artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**Units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Comments**	**NMI Internal Service Identifier**
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Comparison with calibrated microphone used as sound source			dB (re 1 V/Pa)	Frequency	0.05 kHz to 4 kHz	0.08	dB	2	95%	No	20 cm^3 coupler filled with air up to 0.7 kHz, filled with hydrogen above 0.7 kHz	25010C, 25020C
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Comparison with calibrated microphone used as sound source			dB (re 1 V/Pa)	Frequency	4.001 kHz to 7 kHz	0.09	dB	2	95%	No	20 cm^3 coupler filled with hydrogen	25010C, 25020C
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Comparison with calibrated microphone used as sound source			dB (re 1 V/Pa)	Frequency	7.001 kHz to 10 kHz	0.26	dB	2	95%	No	20 cm^3 coupler filled with hydrogen	25010C, 25020C
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Comparison with calibrated microphone used as sound source			dB (re 1 V/Pa)	Frequency	10.001 kHz to 17 kHz	0.17	dB	2	95%	No	4 cm^3 coupler filled with hydrogen	25020C
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Comparison with calibrated microphone used as sound source			dB (re 1 V/Pa)	Frequency	17.001 kHz to 20 kHz	0.32	dB	2	95%	No	4 cm^3 coupler filled with hydrogen	25020C
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Reciprocity in pressure field			dB (re 1 V/Pa)	Frequency	0.05 kHz to 4 kHz	0.04	dB	2	95%	No	20 cm^3 coupler filled with air up to 0.7 kHz, filled with hydrogen above 0.7 kHz	25060S (microphone)
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Reciprocity in pressure field			dB (re 1 V/Pa)	Frequency	4.001 kHz to 7 kHz	0.04	dB	2	95%	No	20 cm^3 coupler filled with hydrogen	25060S (microphone)
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Reciprocity in pressure field			dB (re 1 V/Pa)	Frequency	7.001 kHz to 10 kHz	0.12	dB	2	95%	No	20 cm^3 coupler filled with hydrogen	25060S (microphone)

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Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Reciprocity in pressure field			dB (re 1 V/Pa)	Frequency	10.001 kHz to 17 kHz	0.05	dB	2	95%	No	4 cm^3 coupler filled with hydrogen	25060S (microphone)
Pressure sensitivity level	IEC 61094-1 type LS1Pn or LS1Po microphone	Reciprocity in pressure field			dB (re 1 V/Pa)	Frequency	17.001 kHz to 20 kHz	0.14	dB	2	95%	No	4 cm^3 coupler filled with hydrogen	25060S (microphone)
Free-field sensitivity level	IEC 61094-1 type LS2P or LS2F microphone	Reciprocity in free field			dB (re 1 V/Pa)	Frequency	2.5 kHz to 6.3 kHz	0.21	dB	2	95%	No	Free-field conditions in anechoic chamber	25050C
Free-field sensitivity level	IEC 61094-1 type LS2P or LS2F microphone	Reciprocity in free field			dB (re 1 V/Pa)	Frequency	6.301 kHz to 20 kHz	0.15	dB	2	95%	No	Free-field conditions in anechoic chamber	25050C
Sound pressure level	Sound calibrator, single-frequency (pistonphone)	Calibrated reference microphone	114 nominal	124 nominal	dB (re 20 µPa)	Frequency	0.250 kHz	0.09	dB	2	95%	No		25060S (pistonphone)
Sound pressure level	Sound calibrator, multi-frequency	Calibrated reference microphone	74 nominal	124 nominal	dB (re 20 µPa)	Frequency	0.125 kHz to 2 kHz	0.1	dB	2	95%	No		25060S (sound calibrator)
Sound pressure level	Sound calibrator, multi-frequency	Calibrated reference microphone	74 nominal	124 nominal	dB (re 20 µPa)	Frequency	2.001 kHz to 4 kHz	0.2	dB	2	95%	No		25060S (sound calibrator)
Charge sensitivity	Accelerometer (single ended)	Fringe counting			$C/(m/s^2)$	Frequency	2 Hz to 160 Hz	1	%	2	95%	Yes	Sinusoidal excitation	24010C
Charge sensitivity	Accelerometer (single ended)	Comparison			$C/(m/s^2)$	Frequency	10 Hz to 50 Hz	2	%	2	95%	Yes	Sinusoidal excitation	24020C, 24030C
Charge sensitivity	Accelerometer (single ended)	Comparison			$C/(m/s^2)$	Frequency	51 Hz to 2 kHz	1	%	2	95%	Yes	Sinusoidal excitation	24020C, 24030C

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty						
Quantity	**Instrument or Artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**Units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Comments**	**NMI Internal Service Identifier**
Charge sensitivity	Accelerometer (single ended)	Comparison			$C/(m/s^2)$	Frequency	2.001 kHz to 3.5 kHz	2	%	2	95%	Yes	Sinusoidal excitation	24020C
Charge sensitivity	Accelerometer (single ended)	Comparison			$C/(m/s^2)$	Frequency	2.001 kHz to 10 kHz	2	%	2	95%	Yes	Sinusoidal excitation	24030C
Charge sensitivity	Accelerometer (single ended)	Fringe disappearence			$C/(m/s^2)$	Frequency	3 kHz to 10 kHz	2	%	2	95%	Yes	Sinusoidal excitation	24050S
Charge sensitivity	Accelerometer (single ended)	Fringe disappearence			$C/(m/s^2)$	Frequency	10.001 kHz to 14 kHz	3	%	2	95%	Yes	Sinusoidal excitation	24050S
Charge sensitivity	Accelerometer (single ended)	Fringe disappearence			$C/(m/s^2)$	Frequency	14.001 kHz to 20 kHz	4	%	2	95%	Yes	Sinusoidal excitation	24050S
Voltage sensitivity	Acceleration measuring chain (single ended)	Fringe counting			$V/(m/s^2)$	Frequency	2 Hz to 160 Hz	1	%	2	95%	Yes	Sinusoidal excitation	24010C
Voltage sensitivity	Acceleration measuring chain (single ended)	Comparison			$V/(m/s^2)$	Frequency	10 Hz to 50 Hz	2	%	2	95%	Yes	Sinusoidal excitation	24020C, 24030C
Voltage sensitivity	Acceleration measuring chain (single ended)	Comparison			$V/(m/s^2)$	Frequency	51 Hz to 2 kHz	1	%	2	95%	Yes	Sinusoidal excitation	24020C, 24030C
Voltage sensitivity	Acceleration measuring chain (single ended)	Comparison			$V/(m/s^2)$	Frequency	2.001 kHz to 3.5 kHz	2	%	2	95%	Yes	Sinusoidal excitation	24020C
Voltage sensitivity	Acceleration measuring chain (single ended)	Comparison			$V/(m/s^2)$	Frequency	2.001 kHz to 10 kHz	2	%	2	95%	Yes	Sinusoidal excitation	24030C
Voltage sensitivity	Acceleration measuring chain (single ended)	Fringe disappearence			$V/(m/s^2)$	Frequency	3 kHz to 10 kHz	2	%	2	95%	Yes	Sinusoidal excitation	24050S

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty						
Quantity	**Instrument or Artifact**	**Instrument Type or Method**	**Minimum value**	**Maximum value**	**Units**	**Parameter**	**Specifications**	**Value**	**Units**	**Coverage factor**	**Level of Confidence**	**Is the expanded uncertainty a relative one?**	**Comments**	**NMI Internal Service Identifier**
Voltage sensitivity	Acceleration measuring chain (single ended)	Fringe disappearence			$V/(m/s^2)$	Frequency	10.001 kHz to 14 kHz	3	%	2	95%	Yes	Sinusoidal excitation	24050S
Voltage sensitivity	Acceleration measuring chain (single ended)	Fringe disappearence			$V/(m/s^2)$	Frequency	14.001 kHz to 20 kHz	4	%	2	95%	Yes	Sinusoidal excitation	24050S
Ultrasonic power (in free field)	Ultrasonic source transducer	Pulsed radiation force	0.005	35	W	Frequency	0.5 MHz to 30 MHz	2	%	2	95%	Yes		26100C